

## **ABSTRACT**

A new thermodynamic cycle is disclosed for converting energy from a low temperature stream, external source into useable energy using a working fluid comprising of a mixture of a low boiling component and a higher boiling component and including a higher pressure circuit and a lower pressure circuit. The cycle is designed to improve the efficiency of the energy extraction process by recirculating a portion of a liquid stream prior to further cooling. The new thermodynamic processes and systems for accomplishing these improved efficiencies are especially well-suited for streams from low-temperature geothermal sources.

5